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Baudelet

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(54) **QUANTITATIVE ELEMENTAL PROFILING IN OPTICAL EMISSION SPECTROSCOPY**

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CPC ***G01J 3/28*** (2013.01); ***G01N 21/718*** (2013.01); *G01J 2003/283* (2013.01); *G01N 2021/3196* (2013.01)

(58) **Field of Classification Search**

CPC G01N 21/718; G01N 2021/213; G01N 2021/3196; G01J 3/28; G01J 3/443

See application file for complete search history.

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(57) **ABSTRACT**

The current invention considers the spectrum as a multi-modal distribution over a list of structures containing the wavelength as the main entry and the other information mentioned above in the list as additional entries. Each line is then given a probability of contributing to the spectral line. In the case of multiple spectral lines, inference between spectral lines and their respective levels of confidence will provide a complete picture of the list of probable emitters with a probability factor for each line in order to provide a quantitative assignment of the spectral lines and profiling for a given spectrum.

20 Claims, 9 Drawing Sheets